**PATENTS** 112056-0120 P01-1570





### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

)	
)	
) Examiner: Not yet	assigned
)	
) Art Unit: 2171	
)	
)	
)	
Cesari and McKenn	a, LLP
88 Black Falcon Av	enue
Boston, MA 02210	
June 24, 2005	
	Cesari and McKenne 88 Black Falcon Ave Boston, MA 02210

## **CERTIFICATE OF MAILING**

I hereby certify that the following paper is being deposited with the United States Postal Service as first-class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 24, 2005.

X Information Disclosure Statement

X PTO-1449 and Copies of References

X Return Receipt Postcard

O PE JOJO SE TRADENTE

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re The Application of: Eric Hamilton et al.	)	
Serial No.: 10/705,493	) )	Examiner: Not yet assigned
Filed: November 10, 2003	)	Art Unit: 2171
For: SYSTEM AND METHOD FOR MANAGING FILE DATA DURING CONSISTENCY POINTS	) ) )	
	,	Cesari and McKenna, LLP 88 Black Falcon Avenue Boston, MA 02210 June 24, 2005

### **CERTIFICATE OF MAILING**

I hereby certify that the following Information-Disclosure Statement is being deposited with the United States Postal Service as first-class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 24, 2005.

Melissa L. Altman

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

### **INFORMATION-DISCLOSURE STATEMENT**

In keeping with the duty of candor and good faith owed to the Patent and Trademark Office, Applicants wish to bring to the Examiner's attention the references listed on the accompanying form PTO-1449. A copy of each listed reference is enclosed.

PATENTS 112056-0120 P01-1570

To the extent required by 37 C.F.R. §1.98(a)(3), Applicants have described what they consider to be the relevance of any foreign-language reference. The Office may find additionally relevant material in these or other references.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

Duane H. Dreger Reg. No. 48,836

CESARI AND MCKENNA, LLP

88 Black Falcon Avenue Boston, MA 02210-2414

(617) 951-2500

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

Sheet

# \*NFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

of 5

Complete if Known						
Application Number	10/705,493					
Filing Date	November 10, 2003					
First Named Inventor	Eric Hamilton et al.					
Group Art Unit	2171					
Examiner Name	Not yet assigned					
Attorney Docket Number	112056-0120					

	T	110.00		U.S. PATENT DOCUMEN	<del></del>	**
Examiner Initials *	Cite No.1	Number Kind Code <sup>2</sup> (if known)		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevan Passages or Relevant Figures Appear
	1	Re. 34,100		Hartness	10-13-1992	
	2	4,156,907		Rawlings, et al.	05-29-1979	
	3	4,399,503		Hawley	08-16-1983	
	4	4,598,357		Swenson et al.	07-01-1986	
	5	4,688,221		Nakamura et al.	08-18-1987	
	6	4,698,808		Ishii	10-06-1987	
	7	4,761,785 B1 4,805,090		Clark et al.	ark et al. 08-02-1988	
	8			Coogan	02-14-1989	
	9	4,837,675		Bean et al.	06-06-1989	
	10	4,864,497		Lowry et al.	09-05-1989	
	11	4,896,259		Jacobs et al.	01-23-1990	
	12	4,899,342		Potter et al.	02-06-1990	
	13	4,989,206		Dunphy, Jr. et al.	01-29-1991	
	14	5,124,987		Milligan et al.	06-23-1992	
	15	5,155,835		Belsan	10-13-1992	
	16	5,426,747		Weinreb et al.	06-20-1995	
	17	5,581,724		Belsan et al.	12-03-1996	
	18	6,636,879	B1	Doucette et al.	10-21-2003	
		İ				

	FOREIGN PATENT DOCUMENTS								
Fuencies		F	oreign Patent Do	cument	Name of Patentee or	Date of Publication of	Pages, Columns, Lines,		
Examine r Initials*	Cite No.1	Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)	Applicant of Cited Document	Cited Document MM- DD-YYYY	Where Relevant Passages or Relevant Figures Appear	T <sub>e</sub>	
	19	wo	89/10594		Krakauer, Arno	11-02-1989			
				<del>-  </del>					
Examin Signatu					Date Consid	lered			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitut	e for form 1449A/PTC	)		Complete if Known			
				Application Number	10/705,493		
INFO	PRMATION	DIS	CLOSURE	Filing Date	November 10, 2003		
STA	TEMENT B'	Y A	PPLICANT	First Named Inventor	Eric Hamilton et al.		
				Group Art Unit	2171		
	(use as many she	ets as	necessary)	Examiner Name	Not yet assigned		
Sheet	2	of	5	Attorney Docket Number	112056-0120		

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS						
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
·	20	Administration Guide found at <a href="http://www.openafs.org/pages/doc/AdminGuide/auagd010.htm">http://www.openafs.org/pages/doc/AdminGuide/auagd010.htm</a> , visited on 3/2/2005						
	21	BASILICO, ET AL., Error Correction System Using "Shadow Memory," IBM Technical Disclosure Bulletin, May 1984, pp. 5792-5793						
	22	BITTON, DINA, Disk Shadowing, Proceedings of the 14th VLDB Conference, LA, CA (1988)						
	23	BLASGEN, M.W. ET AL., System R:An architectural Overview, Reprinted from IBM Systems Journal Vol. 20, no. 1, 1981@1981, 1999						
	24	BORENSTEIN, NATHANIEL S., CMU's Andrew project a retrospective, Communications of ACM, (39)12, December 1996						
	BROWN, MARK R. ET AL., <i>The Alpine file system</i> , ACM Transactions on Computing Systems, 3(4):261-293, November 1985  CHEN, PETER M., ET AL., <i>An Evaluation of Redundant Arrays of Disks Using an Amdahl 5890</i> Performance Evaluation, pp. 74-85, 1990							
	27	CHUTANI, SAILESH, ET AL., The Episode file system, In Proceedings of the USENIX Winter 1992						
	28	CLARK, B.E., ET AL., Application System /400 Performance Characteristics, IBM Systems Journal, 28(3): 407-423, 1989						
	29	Data Sheet for the Check Point Software Technologies product Flood-Gate-1 (1997)						
	30	DIBBLE, PETER C., ET Al., Beyond Striping: The Bridge Multiprocessor File System, Computer Science Department, University of Rochester, Aug. 11, 1989						
	31	DOUGLIS, FRED, ET AL., A comparison of two distributed systems: Amoeba and Sprite - Computing Systems, 4(4), Fall 1991, pp. 353-385 ?{copy of article I have has no date or cite}						
	GAIT, JASON, Phoenix: A Safe In-Memory File System. Communications of the ACM, 33(1):8186, January 1990							
	HARTMAN, JOHN H. ET AL., Performance Measurements of a Multiprocessor Sprite Kernel, Proceedings of the USENIX Conference, 1990							
	HITZ, DAVE ET AL., File System Design for an NFS File Server Appliance, Technical Report 3002, Rev. C395, presented Jan. 19, 1994							
Examiner Signature		Date Considered						

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Approved for use through 10/31/2002. OMB 0651-0031\*\*
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	for form 1449A/PTO				Complete if Known
				Application Number	10/705,493
INFO	RMATION	DIS	CLOSURE	Filing Date	November 10, 2003
STAT	<b>TEMENT BY</b>	/ Al	PPLICANT	First Named Inventor	Eric Hamilton et al.
				Group Art Unit	2171
	(use as many shee	ets as	necessary)	Examiner Name	Not yet assigned
Sheet	3	of	5	Attorney Docket Number	112056-0120

		OTHER PRIOR ART NON PATE	NT LITERATUR	E DOCUMENTS						
Examiner Initials *	Cite No.  Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  HOWARD, JOHN H. ET AL. Scale and Performance in a Distributed File System. Carnegie Mellon									
	35	HOWARD, JOHN H, ET AL. Scale and Performance in a Distributed File System, Carnegie Mellon University, CMU-ITC-87-068, Aug. 5, 1987								
	36	HOWARD, JOHN, H. ET AL., Scale and perform System., 6(1), Feb. 1988 pp. 51-81	nance in a distribute	ed file system, ACM Trans. Computer.						
	37	HOWARD, JOHN H., An Overview of the Andrew 062	w File System, Carn	egie Mellon University, CMU-ITC-88-						
	38	The IBM System/38, Chapter 8, pp. 137-15								
	39	ISOMAKI, MARKUS, Differentiated Service for Mathematics, May 9, 1998	the Internet, Depart	ment of Technical Physics and						
	40	KAZAR, MICHAEL L., ET AL., Decorum File S Conference, Anaheim, California, 1990	System Architectura	Overview, USENIX Summer						
	41	LOMET, DAVID., ET AL., The performance of a multiversion access method, ACM SIGMOD International Conference on Management of Data, 19:353-363								
	42	LORIE, RAYMOND, A, Physical integrity in a large segmented database, ACM Trans. Database Systems, (2)1: 91-104, March 1977								
	43	LORIE, RA, Shadow Page Mechanism, IBM Tech	hnical Disclosure B	ulletin, June 1986, pp. 340-342						
	44	MCKUSICK, MARSHALL KIRK, ET AL., A Fa Department of Electrical Engineering and Comput								
	45	MILLER, ETHAN L., ET AL., RAMA: A File Syst Symposium on Mass Storage Systems, Monterey C	tem for Massively P. CA, April 1993, pp.	arallel Computers, 12 <sup>th</sup> IEEE 163-168						
	46	MOONS, HERMAN ET AL., Location-Independed Autumn 1991 EurOpen Technical Conference and	ent Object Invocation Exhibition, pp. 287	n in Open Distributed Systems, -300 (September 16-20, 1991)						
	47	MORRIS, JAMES H., Et Al, Andrew: A Distribut ACM, vol. 29, March 1986, pp 184-201	ed Personal Compu	ting Environment, Comm. of the						
	48	MULLENDER, SAPE J., ET AL., A distributed file service based on optimistic concurrency control, ACM Symposium on Operating System Principles (Orcas Island, Washington). Published as Operating Systems Review, 19(5):51-62, December 1985  MULLER, KEITH, ET AL., A High Performance Multi-Structured File System Design, In Proceedings of the 13th ACM Symposium on Operating Systems Principles, October 1991, pp. 56—67								
	49									
Examine Signature			Date Considered							

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

<sup>1</sup> Unique citation designation number. 2 Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	for form 1449A/PTO				Complete if Known
				Application Number	10/705,493
INFO	RMATION	DIS	CLOSURE	Filing Date	November 10, 2003
STAT	<b>TEMENT BY</b>	A	PPLICANT	First Named Inventor	Eric Hamilton et al.
				Group Art Unit	2171
	(use as many shee	ets as	necessary)	Examiner Name	Not yet assigned
Sheet	4	of	5	Attorney Docket Number	112056-0120

Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²							
	46	MOONS, HERMAN ET AL., Location-Independent Object Invocation in Open Distributed Systems, Autumn 1991 EurOpen Technical Conference and Exhibition, pp. 287-300 (September 16-20, 1991)								
	47	MORRIS, JAMES H., Et Al, Andrew: A Distributed Personal Computing Environment, Comm. of the ACM, vol. 29, March 1986, pp 184-201								
	48	MULLENDER, SAPE J., ET AL., A distributed file service based on optimistic concurrency control, ACM Symposium on Operating System Principles (Orcas Island, Washington). Published as Operating Systems Review, 19(5):51-62, December 1985								
	MULLER, KEITH, ET AL., A High Performance Multi-Structured File System Design, In Proceedings of the 13th ACM Symposium on Operating Systems Principles, October 1991, pp. 56—67									
	50	OUSTERHOUT, JOHN K. ET AL., The Sprite Network Operating System, Computer Science Division, Department of Electrical Engineering and Computer Sciences, Univ. of CA, Berkley, Nov. 19, 1987								
	OUSTERHOUT, JOHN ET AL., Beating the I/O Bottleneck: A Case for Log-Structured File Systems, Technical Report, Computer Science Division, Electrical Engineering and Computer Sciences, University of California at Berkeley, October 30, 1988 OUSTERHOUT, JOHN, Why Aren't Operating Systems Getting Faster as Fast as Hardware?, Digital WRL Technical Note TN-11, October 1989									
	53	OUSTERHOUT, JOHN, A Brief Retrospective On The Sprite Network Operating System, found at <a href="http://www.cs.berkeley.edu/projects/sprite/retrospective.html,visited">http://www.cs.berkeley.edu/projects/sprite/retrospective.html,visited</a> on 3/11/2005								
	54	PATTERSON, D., ET AL., A Case for Redundant Arrays of Inexpensive Disks (RAID), Technical Report, CSD-87-391, Computer Science Division, Electrical Engineering and Computer Sciences, University of California at Berkeley (1987)								
•	55	PATTERSON, D., ET AL., A Case for Redundant Arrays of Inexpensive Disks (RAID), SIGMOD International Conference on Management of Data, Chicago, IL, USA, 1-3 June 1988, SIGMOD RECORD (17)3:109-16 (Sept. 1988)								
	56	PETERSON, ZACHARY NATHANIEL JOSEPH, Data Placement for Copy-on-Write Using Virtual Contiguity, University of CA, Santa Cruz, Master of Science in Computer Science Thesis, September 2002								
	57	QUINLAN, SEAN, A Cached WORM File System, Software-Practice and Experience, 21(12):1289-1299 (1991)								
	58	Redundant Array of Independent Disks, from Wikipedia, the free encyclopedia, found at <a href="http://en.wikipedia.org/wiki/RAID">http://en.wikipedia.org/wiki/RAID</a> , visited on 3/9/2005  ROSENBERG, J., ET AL., Stability in a Persistent Store Based on a Large Virtual Memory, In Security and Persistence, Rosenber, J. & Keedy, J.L. (ed), Springer-Verlag (1990) pp 229-245  ROSENBLUM, MENDEL, ET AL., The LFS Storage Manager, Computer Science Division, Electrical Engin. And Computer Sciences, Univ. of CA, presented at Summer '90 USENIX Technical Conference, Anaheim, CA June 1990								
	59									
-	60									
Examiner Signature		Date Considered								

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	for form 1449A/PTO				Complete if Known
				Application Number	10/705,493
INFO	RMATION	DIS	CLOSURE	Filing Date	November 10, 2003
STAT	<b>LEWENT B</b>	Y A	PPLICANT	First Named Inventor	Eric Hamilton et al.
				Group Art Unit	2171
(use as many sheets as necessary)				Examiner Name	Not yet assigned
Sheet	5	of	5	Attorney Docket Number	112056-0120

	,	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	61	ROSENBLUM, MENDEL, ET AL, The Design and Implementation of a Log-Structured File System July 24, 1991 pp1-15.	
	62	ROSENBLUM, MENDEL, ET AL., The Design and Implementation of a Log-Structured File System, , In Proceedings of ACM Transactions on Computer Systems, (10)1:26-52, February 1992	
	63	SANDBERG, RUSSEL ET AL., Design and implementation of the Sun Network Filesystem. In Proc. Summer 1985 USENIX Conf., pages 119130, Portland OR (USA), June 1985	
	64	SANTRY, DOUGLAS S., ET AL., Deciding When to Forget in the Elephant File System, Operating Systems Review, 34(5), (Dec. 1999) pp.110-123	
	65	SATYANARAYANAN, M., ET AL., The ITC Distributed File System: Principles and Design, In Proceedings of the 10th ACM Symposium on Operating Systems Principles, (19)5:56-67, December 1985	
	66	SATYANARAYANAN, M A survey of distributed file-systems. Annual Review of Computing Science, 4(73-104), 1989	
	67	SATYANARAYANAN, M., ET AL, Coda: A highly available file system for a distributed workstation environment Carnegie Mellon University, CMU-ITC	
	68	SATYANARAYANAN, M., ET AL, Coda: A highly available file system for a distributed workstation environment. IEEE Transactions on Computers, 39(4):447-459, 1990	
<u> </u>	69	SATYANARAYANAN, MAHADEV, Scalable, Secure, and Highly Available Distributed File Access, Computer May 1990: 9-21	
	70	SIDEBOTHAM, BOB, Volumes: The Andrew File System Data Structuring Primitive, EEUG Conference Proceedings, Manchester, UK, Autumn 1986	
	71	User Guide found at http://www.openafs.org/pages/doc/UserGuide/auusg004.htm, visited on 3/2/2005	
_	. 72	WELCH, BRENT B., ET AL., Pseudo Devices: User-Level Extensions to the Sprite File System, Computer Science Division, Department of Electrical Engineering and Computer Sciences, Univ. of CA, Berkley, April 1988	
	73	WELCH, BRENT B., ET AL., <i>Pseudo-File-Systems</i> , Computer Science Division, Department of Electrical Engineering and Computer Sciences, Univ. of CA, Berkley, Oct. 1989	
	74	WITTLE, MARK, ET AL, LADDIS: The next generation in NFS file server benchmarking, USENIX Association Conference Proceedings, April 1993.	

Examiner	Date	
Signature	Considered	

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.